Serial No.: 10/600,866 Filed: June 23, 2003

Page : 2 of 9

## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

## Listing of Claims:

Claims 1-64 (Canceled)

65. (New) A driving method of a light-emitting device comprising:

at least one frame period including at least one line period, the line period comprising: selecting a gate signal line connected to switching TFTs by inputting a selection signal from a gate signal line driving circuit,

inputting a video signal to each of source signal lines from a source signal line driving circuit, and

inputting the video signal inputted to each of the source signal lines to a gate electrode of each of current controlling TFTs through each of the switching TFTs,

wherein an emission brightness of each of EL elements is controlled by the video signal inputted to the gate electrode of each of the current controlling TFTs, and

wherein a drain current of each of the current controlling TFTs when the emission brightness of the EL element becomes maximum is Id, a mobility is  $\mu$ , a gate capacitance per unit area is  $C_0$ , a maximum gate voltage is  $Vgs_{(max)}$ , a channel width is W, a channel length is L, an average value of a threshold voltage is Vth, a deviation from the average value of the threshold voltage is  $\Delta Vth$ , and a difference in the emission brightness of each of the EL elements is within a range of  $\pm n\%$ ,

$$A = \frac{2Id}{\mu * C_0}$$

Serial No.: 10/600,866 Filed: June 23, 2003

Page : 3 of 9

$$\frac{A}{\left(\operatorname{Vgs}_{(\max)} - Vth\right)^2} \le \frac{W}{L} \le \left(\sqrt{1 + \frac{n}{100}} - 1\right)^2 * \frac{A}{\Delta Vth^2}.$$

- 66. (New) A method according to claim 65, wherein the emission brightness of each of the plurality of EL elements is within a range of  $\pm 5\%$ .
  - 67. (New) A method according to claim 65, wherein the maximum gate voltage is 25 V.
- 68. (New) A method according to claim 65, wherein the maximum gate voltage is 25 V and a ratio of the channel width W to the channel length L of each of the plurality of current controlling TFTs is  $2.26 \times 10^{-3} \le W/L \le 0.214$ .
- 69. (New) A method according to claim 65, wherein the gate capacitance is formed in a portion where the channel forming region, the gate insulating film, and the gate electrode overlap with one another in each of the current controlling TFTs.
- 70. (New) A video camera using the driving method of the light-emitting device of claim 65.
- 71. (New) An image reproduction apparatus using the driving method of the light-emitting device of claim 65.
- 72. (New) A head mount display using the driving method of the light-emitting device of claim 65.
- 73. (New) A personal computer using the driving method of the light-emitting device of claim 65.
- 74. (New) A driving method of a light-emitting device comprising:
  at least one frame period including at least one line period, the line period comprising:
  selecting a gate signal line connected to switching TFTs by inputting a selection signal from a gate signal line driving circuit,

Serial No.: 10/600,866 Filed: June 23, 2003

Page : 4 of 9

inputting a video signal to each of source signal lines from a source signal line driving circuit, and

inputting the video signal inputted to each of the source signal lines to a gate electrode of each of current controlling TFTs through each of the switching TFTs,

wherein a power supply line connected to each of the current controlling TFTs is kept a constant potential,

wherein an emission brightness of each of EL elements is controlled by the video signal inputted to the gate electrode of each of the current controlling TFTs, and

wherein a drain current of each of the current controlling TFTs when the emission brightness of the EL element becomes maximum is Id, a mobility is  $\mu$ , a gate capacitance per unit area is  $C_0$ , a maximum gate voltage is  $Vgs_{(max)}$ , a channel width is W, a channel length is L, an average value of a threshold voltage is Vth, a deviation from the average value of the threshold voltage is  $\Delta Vth$ , and a difference in the emission brightness of each of the EL elements is within a range of  $\pm n\%$ ,

$$A = \frac{2Id}{\mu * C_0}$$

$$\frac{A}{\left(\text{Vgs}_{(\text{max})} - Vth\right)^2} \le \frac{W}{L} \le \left(\sqrt{1 + \frac{n}{100}} - 1\right)^2 * \frac{A}{\Delta Vth^2}.$$

75. (New) A method according to claim 74, wherein the emission brightness of each of the plurality of EL elements is within a range of  $\pm 5\%$ .

76. (New) A method according to claim 74, wherein the maximum gate voltage is 25 V.

77. (New) A method according to claim 74, wherein the maximum gate voltage is 25 V and a ratio of the channel width W to the channel length L of each of the plurality of current controlling TFTs is  $2.26 \times 10^{-3} \le W/L \le 0.214$ .

Serial No.: 10/600,866 Filed: June 23, 2003

Page : 5 of 9

78. (New) A method according to claim 74, wherein the gate capacitance is formed in a portion where the channel forming region, the gate insulating film, and the gate electrode overlap with one another in each of the current controlling TFTs.

- 79. (New) A video camera using the driving method of the light-emitting device of claim 74.
- 80. (New) An image reproduction apparatus using the driving method of the lightemitting device of claim 74.
- 81. (New) A head mount display using the driving method of the light-emitting device of claim 74.
- 82. (New) A personal computer using the driving method of the light-emitting device of claim 74.
  - 83. (New) A driving method of a light-emitting device comprising:

at least one frame period including at least one line period, the line period comprising: selecting a gate signal line connected to switching TFTs by inputting a selection signal from a gate signal line driving circuit,

inputting a video signal to each of source signal lines from a source signal line driving circuit, and

inputting the video signal inputted to each of the source signal lines to a gate electrode of each of current controlling TFTs through each of the switching TFTs,

wherein an emission brightness of each of EL elements is controlled by the video signal inputted to the gate electrode of each of the current controlling TFTs, and

wherein a drain current of each of the current controlling TFTs when the emission brightness of the EL element becomes maximum is Id, a mobility is  $\mu$ , a gate capacitance per

Serial No.: 10/600,866 Filed: June 23, 2003

Page : 6 of 9

unit area is  $C_0$ , a maximum gate voltage is  $Vgs_{(max)}$ , a channel width is W, a channel length is L, an average value of a threshold voltage is Vth, a deviation from the average value of the threshold voltage is  $\Delta Vth$ , and a difference in the emission brightness of each of the EL elements is within a range of  $\pm n\%$ ,

$$A = \frac{2Id}{\mu * C_0}$$
 
$$\left| \Delta Vth \right| \le \left( \sqrt{1 + \frac{n}{100}} - 1 \right) * \sqrt{A * L/W} .$$

- 84. (New) A method according to claim 83, wherein the emission brightness of each of the plurality of EL elements is within a range of  $\pm 5\%$ .
  - 85. (New) A method according to claim 83, wherein the maximum gate voltage is 25 V.
- 86. (New) A method according to claim 83, wherein the maximum gate voltage is 25 V and a ratio of the channel width W to the channel length L of each of the plurality of current controlling TFTs is  $2.26 \times 10^{-3} \le W/L \le 0.214$ .
- 87. (New) A method according to claim 83, wherein the gate capacitance is formed in a portion where the channel forming region, the gate insulating film, and the gate electrode overlap with one another in each of the current controlling TFTs.
- 88. (New) A video camera using the driving method of the light-emitting device of claim 83.
- 89. (New) An image reproduction apparatus using the driving method of the lightemitting device of claim 83.

Serial No.: 10/600,866 Filed: June 23, 2003

Page : 7 of 9

90. (New) A head mount display using the driving method of the light-emitting device of claim 83.

91. (New) A personal computer using the driving method of the light-emitting device of claim 83.

92. (New) A driving method of a light-emitting device comprising:

at least one frame period including at least one line period, the line period comprising: selecting a gate signal line connected to switching TFTs by inputting a selection signal from a gate signal line driving circuit,

inputting a video signal to each of source signal lines from a source signal line driving circuit, and

inputting the video signal inputted to each of the source signal lines to a gate electrode of each of current controlling TFTs through each of the switching TFTs,

wherein a power supply line connected to each of the current controlling TFTs is kept a constant potential,

wherein an emission brightness of each of EL elements is controlled by the video signal inputted to the gate electrode of each of the current controlling TFTs, and

wherein a drain current of each of the current controlling TFTs when the emission brightness of the EL element becomes maximum is Id, a mobility is  $\mu$ , a gate capacitance per unit area is  $C_0$ , a maximum gate voltage is  $Vgs_{(max)}$ , a channel width is W, a channel length is L, an average value of a threshold voltage is Vth, a deviation from the average value of the threshold voltage is  $\Delta Vth$ , and a difference in the emission brightness of each of the EL elements is within a range of  $\pm n\%$ ,

$$A = \frac{2Id}{\mu * C_0}$$
 
$$\left| \Delta Vth \right| \le \left( \sqrt{1 + \frac{n}{100}} - 1 \right) * \sqrt{A * L/W} \ .$$

Serial No.: 10/600,866 Filed: June 23, 2003

Page : 8 of 9

93. (New) A method according to claim 92, wherein the emission brightness of each of the plurality of EL elements is within a range of  $\pm 5\%$ .

- 94. (New) A method according to claim 92, wherein the maximum gate voltage is 25 V.
- 95. (New) A method according to claim 92, wherein the maximum gate voltage is 25 V and a ratio of the channel width W to the channel length L of each of the plurality of current controlling TFTs is  $2.26 \times 10^{-3} \le W/L \le 0.214$ .
- 96. (New) A method according to claim 92, wherein the gate capacitance is formed in a portion where the channel forming region, the gate insulating film, and the gate electrode overlap with one another in each of the current controlling TFTs.
- 97. (New) A video camera using the driving method of the light-emitting device of claim 92.
- 98. (New) An image reproduction apparatus using the driving method of the lightemitting device of claim 92.
- 99. (New) A head mount display using the driving method of the light-emitting device of claim 92.
- 100. (New) A personal computer using the driving method of the light-emitting device of claim 92.